

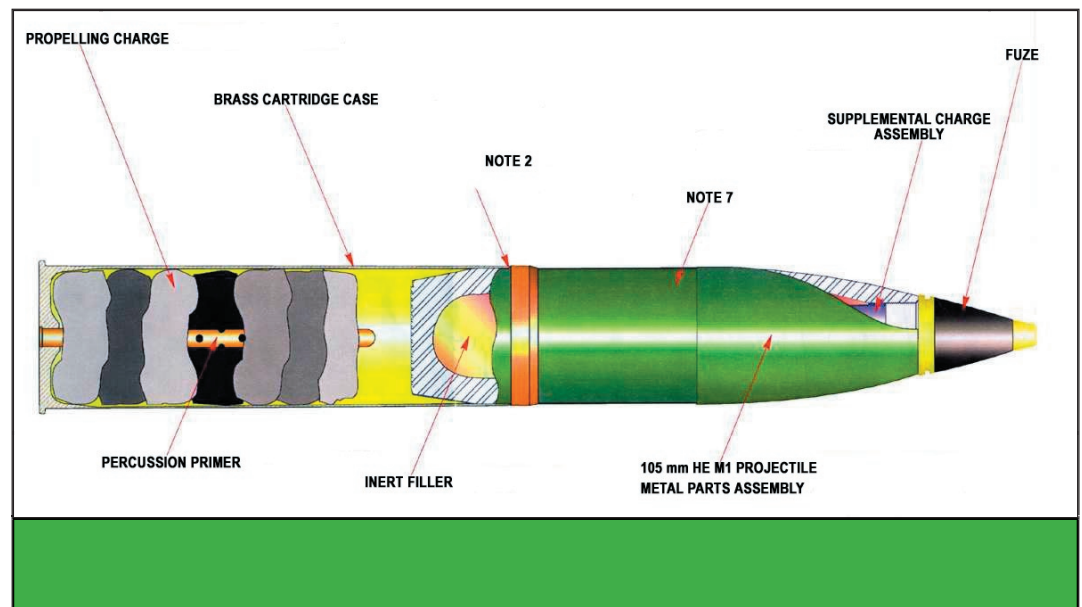


# Air Force Research Laboratory | AFRL

*Science and Technology for Tomorrow's Aerospace Forces*

## Success Story

### NEW 105 mm PRACTICE PROJECTILE FOR SPECIAL OPERATIONS GUNSHIPS



A new 105 mm practice round saves the Air Force Special Operations Command (AFSOC) approximately \$1.2 million per year, increases storage capacity worldwide by 40%, and increases the number of usable AC-130 gunship crew training ranges. Twelve ranges were previously unavailable for training because they prohibited the use of high-explosive projectiles.

Changing to the new practice round was transparent to operators and maintainers alike. There were no software changes to internal and external ballistics because the rounds were identical to service ammunition. The use of inert filler eliminated the possibility of an in-bore malfunction and the need for expensive X-ray inspection, and resulted in AFSOC purchasing 40,000 of the newly designed target practice rounds.



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### **Accomplishment**

Using excess inert-filled projectiles from a previous 105 mm test, engineers and technicians from the Munitions Directorate's Fuze Experimentation Facility modified, assembled, and ground tested the first 20 prototype 105 mm practice projectiles. Directorate technicians also manufactured and assembled the projectiles used in flight testing at Eglin AFB, Florida.

### **Background**

AFSOC notified the directorate of the need for a new projectile to replace the projectile used in training AC-130 gunship crews. Normally, AC-130 crews use a 105 mm high-explosive cartridge known as the HE M1.

Crews fire regularly to exercise the firing proficiency capabilities of the aircraft and to train crew members. AFSOC AC-130 gunship aircrews fire about 18,000 rounds of 105 mm ammunition every year at a cost of approximately \$7 million. The main reason for requesting a new projectile was the depleting stockpiles and cost of the high-explosive projectile used for training.

Munitions  
Support to the Warfighter

### **Additional information**

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (02-MN-03)